UPS

Pure Sinewave UPS

USER'S MANUAL

1.6K / 3.2K / 5KVA
6.4K / 8K/ 10KVA

1. INTRODUCTION

1. 1.1 General Description

This UPS, a powerful all-in-one solution, delivers unsurpassed clean true sine wave output power and combines this with a powerful battery charging current. Applicable for any kind of loads such as air conditioner, home appliances, consumer electronic and office equipments. This series features a durable & continuous 24 operation.

The built-in intelligent charger automatically charges any type of batteries without the risk of overcharge. The compact & modular design makes utility interactive installations easier and more cost effective. It is a high quality product that offers the best price/performance ratio in the industry.

1.2 Key features

- Multiple microprocessor design base.
- User Friendly LCD Control Panel
- Compatible with both linear & non-linear load.
- Powerful charger to support batteries of 500AH up.
- 24 hours operation for Long Time Back Up
- DC start.
- THD less than 3%.
- High efficiency design to save electricity.
- Design to operate under harsh environment

1.3 Important Notices

1. Read instructions carefully before operating the UPS.
2. UPS power connect instruction should be followed.
3. Please don‘t open the case to prevent danger.
5. Retain the load within the rating of UPS to prevent faults.
6. Keep the UPS clean and dry.

2. SAFETY INSTRUCTIONS

RISK OF ELECTRIC SHOCK

Do not open unless for Qualified Personnel

Please read carefully the instructions before working on this product.

2.1 Transporting

1. Disconnect all power cables if necessary.
2. Be careful not to damage the UPS while transporting.
3. Don‘t move the UPS upside down.
4. Please transport the UPS system only in the original packaging to protect it against shock and impact.

2.2 Positioning

1. Do not put the UPS on rugged or declined surface.
2. Do not install the UPS system near water or in damp environments.
3. Do not install the UPS system where it would be exposed to direct sunlight or near heat.
4. Do not block off ventilation openings in the UPS system’s housing and don’t leave objects on the top of the UPS.
5. Keep the UPS far away from heat emitting sources.
6. Do not expose it to corrosive gas.
7. Ambient temperature : 0℃ - 40℃

2.3 Installation

1. Connect the UPS system only to an earthed shockproof socket outlet.
2. Place cables in such a way that no one can step on or trip over them.

2.4 Operation

1. Do not disconnect the mains cable on the UPS system or the building wiring socket outlet during operations since this would cancel the protective earthing of the UPS system and of all connected loads.
2. The UPS has its own power source (batteries). The output terminals may be live even when the UPS is not connected to the AC supply.
3. Ensure that no fluids or other foreign objects can enter the UPS system.

2.5 Maintenance and Service

1. Even after the unit is disconnected from the mains power supply (building wiring socket outlet), components inside the UPS system are still connected to the battery and are still electrically live and dangerous.
2. Before carrying out any kind of servicing and/or maintenance, disconnect the batteries and verify that no current is present.
3. Batteries may cause electric shock and have a high short-circuit current. Please take the precautionary measures specified below and any other measures necessary when working with batteries:
   - remove wristwatches, rings and other metal objects
   - use only tools with insulated grips and handles.

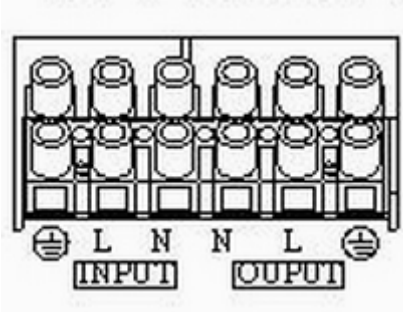
3. CABLE CONNECTION

3.1 Inspection

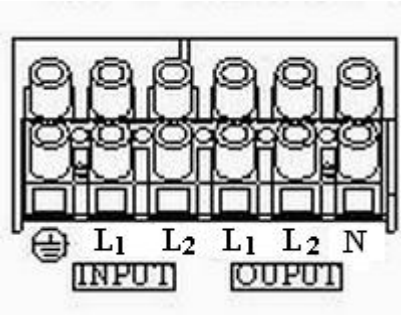
1. The system may be installed and wired only by qualified electricians in accordance with applicable safety regulations.
2. When installing the electrical wiring, please note the nominal amperage of your incoming feeder.
3. Inspect the packaging carton and its contents for damage. Please inform the vendor immediately if you find signs of damage. Please keep the packaging in a safe place for future use.
4. Please ensure that the incoming feeder is isolated and secured to prevent it from being switched back on again.

3.2 Connection

UPS Input and Output Connection: Connect the input and output wires to the corresponding input and output terminals according to the following diagram.



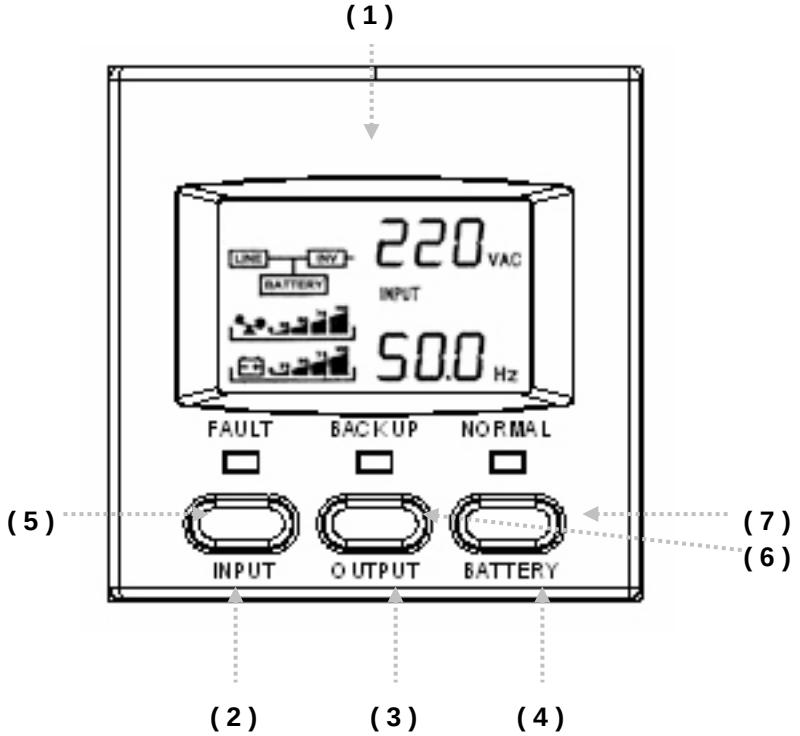
Terminal for
120V System Models



Terminal for
230V System Models

4. SYSTEM DESCRIPTION

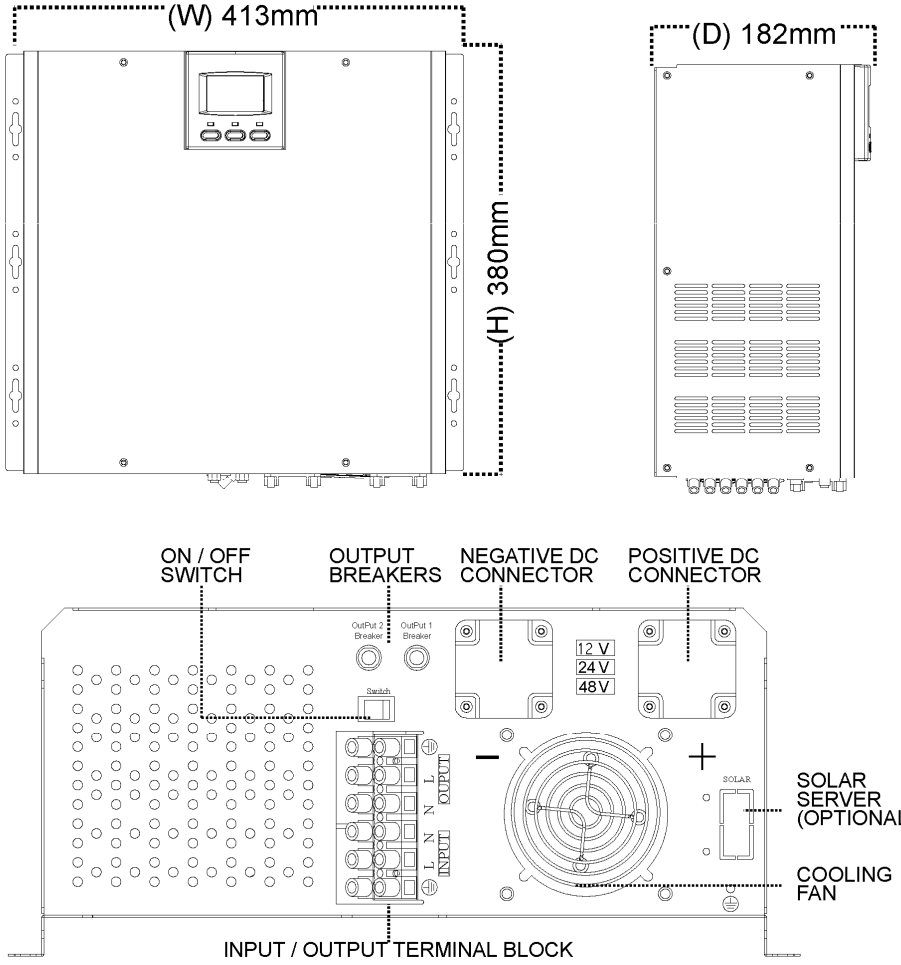
4.1 Front Panel Description



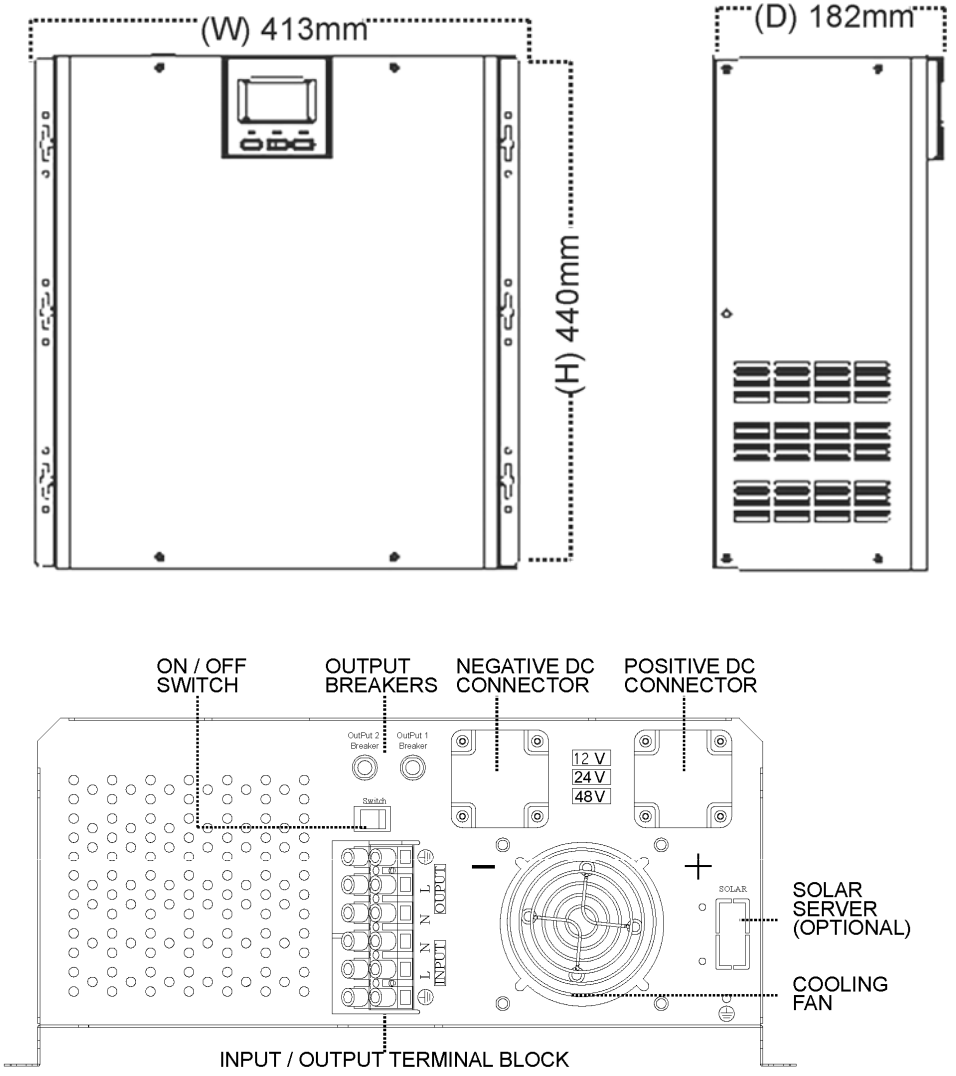
1. LCD Display: indicates the UPS operation information, including UPS status, input/output voltage, input/output frequency, battery capacity, output load, temperature, etc.
2. Input: press to display Input Voltage and Frequency on the LCD Display.
3. Output: press to display Output Voltage and Frequency on the LCD Display.
4. Battery: press to display Battery Voltage and Load percentage on the LCD Display
5. Fault LED (red): indicates the UPS is in fault condition because of inverter shutdown or batteries needs to be replaced.
6. Back Up LED (yellow): To indicate the UPS is in battery back-up mode.
7. Normal LED (green): To indicate the UPS is operating normally.

4.2 Outline Description

For 1.6KVA, 3.2KVA, 5KVA



For 6.4KVA, 8KVA, 10KVA



5. UPS OPERATION

5.1 Check Prior to Start Up

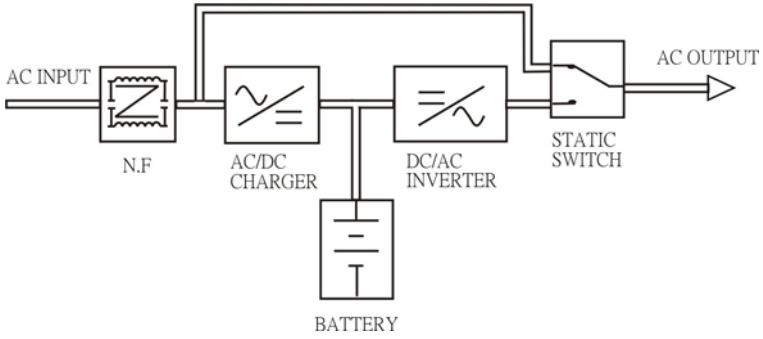
1. Ensure the UPS is in a suitable positioning.
2. Check input cord is secured.
3. Make sure the load is disconnected or in the “OFF” position.
4. Check if input voltage meets the UPS rating required.

5.2 Storage Instruction

Disconnect input power in rear panel if you will not use it for long period. If the UPS is stored over 3 months, please keep supplying power to the UPS for at least 24 hours to ensure battery fully recharged.

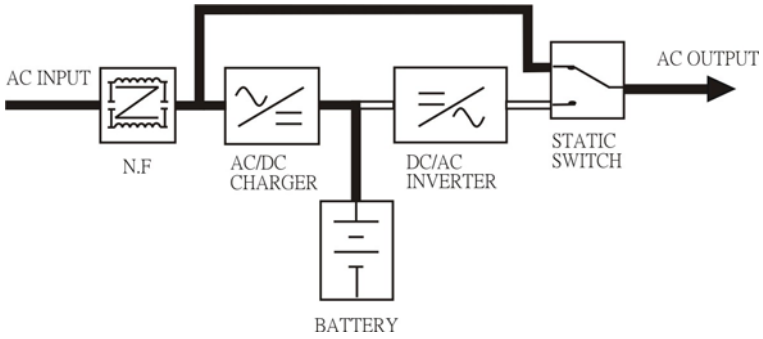
6. OPERATION MODES OF THE UPS

6.1 UPS System Block Diagram



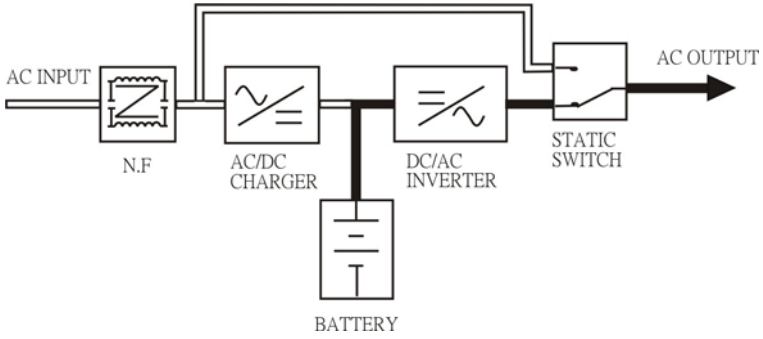
6.2 Normal Operation

There are two main loops when AC utility is normal: the AC loop and the battery charging loop. The AC output power comes from AC utility input and passes through static switch to support power to load. The battery charging voltage comes from AC utility input and converted by AC/DC charger to support battery-charging power.



6.3 AC Utility Failure (Battery Mode)

The AC output comes from battery, passing through DC/AC inverter and static switch within the battery backup time.



7. SPECIFICATION OF UPS

Input	Capacity	VA	1.6KVA	3.2KVA	5KVA	6.4KVA	8KVA	10KVA
		Watts	1000W	2000W	3000W	4000W	5000W	6000W
	Nominal Voltage	Nominal Voltage	120Vac or 220 Vac Systems					220Vac Systems
		Acceptable Voltage	90Vac ~ 150 Vac or 184Vac ~270Vac					184Vac ~270Vac
		Frequency	47Hz ~ 55Hz or 57Hz ~ 65Hz					
Output	Voltage		110Vac or 115Vac or 120Vac or					220Vac or 230Vac or 240Vac
			220Vac or 230Vac or 240Vac					
	Voltage Regulation		+/- 10% RMS					
	Frequency		50Hz or 60Hz					
	Wave Form		Pure Sinewave					
	Power Factor		0.625	0.625	0.600	0.625	0.625	0.600
	Transfer Time		< 8 milliseconds (typical)					
Battery	Battery DC Voltage		12Vdc	12Vdc	24Vdc	24Vdc	48Vdc	48Vdc
	Battery Type		Batteries up to 500Ah (not included)					
	Maximun Charging Current		> 45A	> 45A	> 70A	> 70A	> 30A	> 30A
Display	LCD		UPS Status, I/P & O/P Voltage and Frequency, Load %, Battery Voltage and %, Temperature, Model Specifications, etc					
	LED Indicators		Green LED: Normal Operation / Yellow LED: Battery Back UP / Red LED: UPS Fault					
Audible Alarm	Battery Mode		No Alarm					
	Battery Low		Beep every 5 seconds					
	Fault		Beep continuously					
	Overload		Beep continuously					
Environment	Operation Temperature		0° C - 40° C ; 32° F - 104 ° F ;					
	Humidity		0-95% Non-condensing					
	Acoustic Noise		Less than 55dB at 1mt					
Dimensions	Tower(W x H x D) mm		413 x 380 x 182 / 413 x 440 x 182					

** Specification Subject to Chance Without Prior Notice*